| | Application No. | Applicant(s) |
|---|---|---|
| **Notice of Allowability** | 10/618,409 | DETTINGER ET AL. |
| | Examiner | Art Unit | |
| | Thanh-Ha Dang | 2163 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *12/28/05*.

2. ☒ The allowed claim(s) is/are *21-33 that are renumbered as 1-13*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None  of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

    **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892).

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date *1/28/06*

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *03/06/06* .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

**SAFET METJAHIC**
**SUPERVISORY PATENT EXAMINER**
**TECHNOLOGY CENTER 2100**

## DETAILED ACTION

## EXAMINER'S AMENDMENT

1. Authorization for this examiner's amendment was given in a telephone interview with Mr. Gero G. McClellan on March 6, 2006.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

21.    (Currently Amended)    A computer-implemented method for building queries, comprising:

providing a logical model to logically describe the physical fields, the logical model comprising logical fields corresponding to respective physical fields, wherein as least some of the logical fields are selectable as logical result fields in an abstract queries;

providing a graphical user interface allowing user selection and arrangement of logical result fields selected from the logical model;

receiving user input specifying a selection and a location, in the graphical user interface, of a first logical result field;

receiving user input specifying a selection and a location, in the graphical user interface, of a second logical result field, wherein the first and second logical

result fields have a relative geometric relationship <u>as displayed in the graphical user interface</u> and define at least a portion of an abstract query; and

transforming the abstract query into an executable query containing at least one combinatorial statement containing representations of the first and second logical result fields, ~~and~~ <u>the at least one combinatorial statement</u> being generated as a result of the relative geometric relationship.

22.    (Original)    The method of claim 21, wherein the combinatorial statement is a UNION.

23.    (Original)    The method of claim 21, further comprising displaying each of the logical fields of the logical model as selectable logical result fields in the graphical user interface.

24.    (Currently Amended)    A computer readable <u>storage</u> medium containing a graphical user interface program which, when executed, performs an operation for building abstract queries defined with respect to a logical model comprising a plurality of <u>definitions</u> for logical field<u>s</u> ~~definitions~~ mapping to physical fields of physical entities of the data,<u> wherein as least some of the logical fields are selectable as logical result fields in the abstract queries,</u> the operation comprising:

receiving user input specifying a selection and a location, in the graphical

user interface, of a first logical result field; wherein the graphical user interface

allows user selection of logical result fields from the logical model and supports

combinatorial relations between user selected logical result fields; [[and]]

receiving user input specifying a selection and a location, in the graphical

user interface, of a second logical result field, wherein the first and second logical

result fields define at least a portion of an abstract query[[,]] and which is

transform[[ed]]ing the abstract query into an executable query containing

at least one combinatorial statement containing counterparts of the first and

second logical result fields.


25.     (Currently Amended)        The method computer readable storage

medium of claim 24, wherein the combinatorial statement is a UNION.


26.     (Currently Amended)        A computer readable storage medium

containing a program which, when executed, performs an operation for building

abstract queries defined with respect to a logical model comprising a plurality of

definitions for logical fields definitions mapping to physical fields of physical

entities of the data, wherein as least some of the logical fields are selectable as

logical result fields in the abstract queries, the operation comprising:

receiving user input specifying a selection and a location, in a graphical

user interface, of a first logical result field; wherein the graphical user interface

allows user selection and arrangement of logical result fields selected from the logical model;

receiving user input specifying a selection and a location, in the graphical user interface, of a second logical result field, wherein the first and second logical result fields have a relative geometric relationship <u>as displayed in the graphical user interface</u> and define at least a portion of an abstract query; and

transforming the abstract query into an executable query containing at least one combinatorial statement containing counterparts of the first and second logical result fields, ~~and~~ <u>the at least one combinatorial statement</u> being generated as a result of the relative geometric relationship.


27.    (Currently Amended)       The computer readable <u>storage</u> medium of claim 26, wherein the combinatorial statement is a UNION.


28.    (Currently Amended)       The computer readable <u>storage</u> medium of claim 26, wherein the relative geometric relationship is vertical.


29.    (Currently Amended)       A computer system, comprising<u>:</u>

<u>at least one</u> memory <u>containing</u> ~~and at least one processor, and further comprising~~:

a logical model comprising a plurality of logical field definitions mapping to physical fields of physical entities of data, whereby the logical model <u>defines a</u>

plurality of logical fields providing[[es]] a logical view of the data, wherein each of the logical field definitions comprising a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name and a reference to an access method selected from at least two different access method types; wherein each of the different access methods types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition;

a query specification defining an interface to the plurality of logical field definitions thereby allowing abstract queries to be composed on the basis of the plurality of logical field definitions; and

a graphical user interface allowing user selection and arrangement of logical result fields selected from the logical model; wherein the graphical user interface comprises input cells for user-selected logical result fields and wherein a predefined geometric relationship between cells specifies whether user-selected logical result fields in the cells are related by a first combinatorial statement type or a second combinatorial statement type; and

at least one processor configured to access the one or more memories.


30. (Original) The system of claim 29, wherein the first combinatorial statement type is a UNION and the second combinatorial statement type is a JOIN.

31.    (Original)    The system of claim 29, wherein the predefined geometric relationship is vertical.

32.    (Currently Amended)    The system of claim 29, wherein user-selected logical result fields in horizontally adjacent cells are JOINed.

33.    (Original)    The system of claim 29, further comprising a relational database containing the physical entities of data.

### *Allowable Subject Matter*

2.  Claims 21-33 are allowed and are renumbered as 1-13.

The following is an examiner's statement of reasons for allowance: Claims 21-33 are allowable because the prior art made of record does not teach or fairly suggest the combination of elements as recited in independent Claims 21, 24, 26 and 29.

Specifically, the prior art of record does not teach:

•  Transforming the abstract query into an executable query containing at least one combinatorial statement containing representations of the first and second logical result fields, the at least one combinatorial statement being generated as a result of the relative geometric relationship taken with the other limitations as recited in Claim 21.

- Transforming the abstract query into an executable query containing at least one combinatorial statement containing counterparts of the first and second logical result fields taken with the other limitations as recited in Claim 24.

- Transforming the abstract query into an executable query containing at least one combinatorial statement containing counterparts of the first and second logical result fields, the at least one combinatorial statement being generated as a result of the relative geometric relationship taken with the other limitations as recited in Claim 26.

- A logical model comprising a plurality of logical field definitions mapping to physical fields of physical entities of data, whereby the logical model defines a plurality of logical fields providing a logical view of the data, wherein each of the logical field definitions comprising a logical field name, at least one location attribute identifying a location of physical data corresponding to the logical field name and a reference to an access method selected from at least two different access method types; wherein each of the different access methods types defines a different manner of exposing the physical data corresponding to the logical field name of the respective logical field definition taken with the other limitations as recited in Claim 29.

The dependent claims being definite, further limiting and fully enabled by the Specification are also allowed.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Ha Dang whose telephone number is 571-272-4033. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thanh-Ha Dang
Examiner
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